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| Notice of Allowability | Application No. | Applicant(s) | |
| | 09/485,759 | GLOGAU ET AL. | |
| | Examiner | Art Unit | |
| | Minh Dinh | 2132 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to a telephone interview with Jeffrey Michael, the attorney of record, on 1/20/2005.

2. The allowed claim(s) is/are 4-5,17-18,20-22 and 29.

3. The drawings filed on 09 September 2004 are accepted by the Examiner.

4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some* c) None of the:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

(a) including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached

1) hereto or 2) to Paper No./Mail Date _____.

(b) including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1. Notice of References Cited (PTO-892)
- 2. Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3. Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
- 4. Examiner's Comment Regarding Requirement for Deposit
of Biological Material
- 5. Notice of Informal Patent Application (PTO-152)
- 6. Interview Summary (PTO-413),
Paper No./Mail Date 1/21/2005.
- 7. Examiner's Amendment/Comment
- 8. Examiner's Statement of Reasons for Allowance
- 9. Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Jeffrey A. Michael on 1/20/2005.

The application has been amended as follows: claims 14-16, 19 and 26 have been cancelled; claims 17, 20 and 29 have been amended. Please enter the attached amendment.

2. The following is an examiner's statement of reasons for allowance. The present invention is directed to a method for hiding data within a digital signal. In particular, independent claim 4 is directed to a method for embedding a message into the first portion of a carrier signal and embedding the first portion of the carrier signal into the second portion of the carrier signal. The closest prior art, Veldhuis et al. (EP 0 359 325 A1), discloses a method for embedding a message into the first portion of a carrier signal; however, Veldhuis fails to disclose embedding the first portion of a carrier signal into the second portion of a carrier signal.

Independent claim 17 is directed to a method for generating an encryption sequence based on an encryption key, embedding the encryption sequence into a carrier signal, transmitting the carrier signal to a receiving location, extracting the

encryption sequence, and deciphering the encryption sequence to obtain the encryption key at the receiving location. Veldhuis discloses a method for embedding a message into a carrier signal and Henry (4,471,164) discloses transmitting an encryption sequence to a receiving location; however, Henry fails to disclose deciphering the encryption sequence to obtain the encryption key at the receiving location.

Independent claim 20 is directed to a method for performing an exclusive-OR of an encrypted message into the first portion of a carrier signal and embedding message extraction information into the second portion of the carrier signal. Barton (5,912,972) discloses a method for embedding an encrypted message into the first portion of a carrier signal and embedding message extraction information into the second portion of the carrier signal; however, Barton fails to disclose performing an exclusive-OR of the encrypted message into the first portion of a carrier signal.

Independent claim 29 is directed to an apparatus comprising an encrypted message embedder configured to embed an encrypted message into a carrier signal by replacing a first LSB plane of a digital image with information based on a second LSB plane of the digital image and to perform an exclusive-OR of the encrypted message with the second LSB plane of the digital image. Veldhuis discloses an apparatus for embedding a message into a carrier signal by performing an exclusive-OR of the message with the LSB plane of a digital image and Nakamura discloses encrypting a message before the message is embedded into a carrier signal; however, Veldhuis and Nakamura fails to discloses replacing a first LSB plane of a digital image with

information based on a second LSB plane of the digital image and to perform an exclusive-OR of the encrypted message with the second LSB plane of the digital image

The prior art, taken either singly or in combination, fails to anticipate or fairly suggest the limitations of applicant's independent claim, in such a manner that a rejection under 35 U.S.C 102 or 103 would be proper. The claimed invention is therefore considered to be in condition for allowance as being novel and nonobvious over prior art

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Dinh whose telephone number is 571-272-3802. The examiner can normally be reached on Mon-Fri: 10:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MD

Minh Dinh
Examiner
Art Unit 2132

MD
1/21/05

Gregory Morse
GREGORY MORSE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100